ARD-7 FORM
INFORMATION REQUIRED FOR PERMITS FOR ENGINES AND TURBINES

Air Resources Division/Permitting and Environmental Health Bureau

RSA/Rule: RSA 125-C:12 and Env-A 1700

I. FUEL BURNING EQUIPMENT INFORMATION – *Complete a separate form for each emission unit.*

A. Emission Unit Description:

☐ Reciprocating Internal Combustion Engine ☐ Combustion Turbine

☐ Rich Burn
☐ Lean Burn
☐ 2-Stroke
☐ 4-Stroke
☐ Dual-fuel

Use:
☐ Emergency
☐ Non-Emergency
☐ Demand Response
☐ Other_____

Date Construction Commenced[1]

Installation Date[1] Manufacture Date[1]

Manufacturer

Model Number

Serial Number

MMBtu/hr
Maximum Gross Heat Input Rate

☐ gal/hr
☐ mmcf/hr
Maximum Fuel Flow Rate

☐ bhp
☐ bkW
Maximum Engine Output Rating

☐ EPA Certified Not to Exceed Limits? If yes, provide EPA Certification Sheet.

B. Stack Information

Is emission unit equipped with multiple stacks? ☐ Yes ☐ No *(If yes, provide data for each stack)*
Are multiple units connected to this stack? ☐ Yes ☐ No
(If yes, identify other emission units or devices on this stack:) _____

Stack #	Discharge Height Above Ground Level (ft)	Inside Diameter (ft) or Area (ft^2) at Stack Exit[2]	Exhaust Temperature (°F)	Exhaust Flow (acfm)	Stack Capped or Otherwise Restricted[3] (Yes - Type/No)	Exhaust Orientation[4]	Stack Monitor (Yes/No) and Description
#5 (Ex)	*65 ft (Example)*	*4 ft (Example)*	*70 °F (Example)*	*1500 acfm (Example)*	*Yes - Rain Cap (Example)*	*Vertical (Example)*	*Yes – CEM for PM (Example)*

C. Hours of Operation

Hours per day: _____ Days per year: _____

II. FUEL USAGE INFORMATION (List each fuel utilized by the emission unit)

Fuel Type	Heat Value[5]	Units	Sulfur Content (%)	Maximum Fuel Flow Rate	Units	Maximum Gross Heat Input Rate	Units
ULSD (Example)	*137,000 (Example)*	*Btu/gal (Example)*	*0.0015 (Example)*	*20 (Example)*	*gal/hr (Example)*	*2.74 (Example)*	*MMBtu/hr (Example)*

III. UNCONTROLLED AIR POLLUTANT EMISSIONS (list emissions that result from the burning of each fuel utilized by the emission unit <u>prior</u> to add on controls – *use additional sheets if necessary*)

Pollutant	Emission Factor	Units	Emission Factor Source[6]	Actual (lb/hr)	Potential (lb/hr)	Actual (tpy)	Potential (tpy)
TSP							
PM_{10}							
NO_x							
VOC							
CO							
SO_2							
Other *(specify)*							

Provide an example of the calculations used to determine uncontrolled air pollutant emissions, if applicable:

IV. NEW HAMPSHIRE REGULATED TOXIC AIR POLLUTANTS (RTAPs) – Env-A 1400

Does the emission unit burn a non-exempt fuel[7] and emit any of the RTAPs listed in Env-A 1400?
☐ Yes ☐ No
If **Yes**, attach your facility's most recent compliance demonstration.

V. POLLUTION CONTROL EQUIPMENT

☐ **Not Applicable**

Note: If the emission unit utilizes more than one type of pollution control equipment, provide data for each type of equipment.

A. Type of Equipment

Type of Control Device	Manufacturer of Control Device	Model and Serial Number of Control Device (if known)	Pollutant(s) Controlled by Device
Oxidation Catalyst (Example)	*DCL International, Inc. (Example)*	*DC 18012 CC Serial #: N/A (Example)*	*CO and HAPs (Example)*

For each control device, include an Air Pollution Control Equipment Monitoring Plan pursuant to Env-A 810.

B. Controlled Air Pollution Emissions (list emissions that result from the burning of each fuel utilized by the emission unit after all add on controls – *use additional sheets if necessary*)

Pollutant	Controlled Emission Factor	Units	Emission Factor Source[6]	Actual (lb/hr)	Potential (lb/hr)	Actual (tpy)	Potential (tpy)
TSP							
PM_{10}							
NO_x							
VOC							
CO							
SO_2							
Other *(specify)*							

Provide an example of the calculations used to determine uncontrolled air pollutant emissions, if applicable:

ARD-7 FORM INFORMATION INSTRUCTIONS

1 If exact date is unknown for Date Construction Commenced, Manufacture Date or Installation Date, you may use 01/01/year. The exception is for calendar years 2006 and 2007, where a month and year are required to determine rule applicability. Date Construction Commenced refers to the date the owner or operator has entered into a contractual obligation to undertake and complete a continuous program of construction, reconstruction, or modification of the emission unit. Manufacture Date refers to the date the emission unit was originally produced. Installation Date refers to the date the emission unit is installed at the facility.

2 Examples of Inside Diameter or Area at Stack Exit: Diameter at discharge point of convergence cone, if applicable

3 Flapper valves and other devices which do not restrict the vertical exhaust flow while the emission unit is operating are not considered obstructions or restrictions.

4 Examples of Exhaust Orientation: Vertical, Horizontal, Downward
Note: for a stack to be considered vertical and unobstructed, there shall be no impediment to vertical flow, and the exhaust stack extends 2 feet higher than any roofline within 10 horizontal feet of the exhaust stack

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Liquid Fuels	Heat Value
Ultra-Low Sulfur Diesel (ULSD)	137,000 Btu/gal
#2 Fuel Oil	140,000 Btu/gal
Kerosene	135,000 Btu/gal
Other – Liquid	Obtain from Fuel Supplier

Gaseous Fuels	Heat Value
Natural Gas	1,020 Btu/cubic foot
Propane (LPG)	94,000 Btu/gal
Gasoline	130,000 Btu/gal
Other (Gaseous)	Obtain from Fuel Supplier

6 Emission factor sources may include:
- Continuous Emissions Monitor (CEM)
- Stack Test (Provide Date)
- Vendor Guaranteed Rates (Provide Documentation)
- EPA Certified Not To Exceed Limits (i.e. Tier II engine – submit specifications sheet or certification for documentation)
- AP-42 Emission Factors
- Material Balance (Provide Sample Calculation)
- Engineering Estimate

7 Fuels exempt from Env-A 1400 include:
- Virgin Petroleum Products (#2, #4, or #6 fuel oil, gasoline, kerosene, jet fuel, etc.)
- Coal
- Natural Gas
- Propane
- Biofuels – as defined in Env-A 1401.03(b)
- Biomass – as defined in Env-A 1401.03(c)